

AMENDMENTS TO THE CLAIMS

1-4. (Canceled)

5. (New) A method for continuous culture of anaerobic microorganisms in a fermentor, wherein the active cell population is maintained constant, when the fermentation is operated continuously, by feeding substrate and alkaline solution alternatively, and wherein the residual glucose concentration of culture liquid is controlled by:

<I> feeding the substrate at a rate based on an alkaline consumption per unit time, wherein there is performed the following:

<I-a> measuring pH of the culture liquid with a pH meter;

<I-b> calculating a glucose quantity (G_0) based on the measured pH;

<I-c> calculating a rate of substrate flow-in (F_2) based on the calculated G_0 ; and

<I-d> feeding the substrate at the speed of calculated F_2 ; and essentially at the same time

<II> recycling substrate back to the fermentor, wherein there is performed the following:

<II-a> bleeding out the culture liquid included the cells, removing the cells; and

<II-b> returning to the fermentor the substrate that the cells have been removed from in the culture liquid.

6. (New) The method for continuous culture of the anaerobic microorganisms according to Claim 5, wherein the residual glucose concentration is maintained constant by feeding substrate of molarity that is equal to cumulative consumption molarity of alkaline solution added in order to control pH of the culture liquid.

7. (New) The method for continuous culture of the anaerobic microorganisms according to Claim 5, wherein a diluted alkaline solution is used forming a large dilution effect of culture liquid whereby high specific activity of the microorganisms and high volumetric productivity are maintained.

8. (New) The method for continuous culture of the anaerobic microorganisms according to Claim 6, wherein a diluted alkaline solution is used forming a large dilution effect of culture liquid whereby high specific activity of the microorganisms and high volumetric

productivity are maintained.